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EXAMINER

MASKULINSKI, MICHAEL C

ART UNIT	PAPER NUMBER
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2184

DATE MAILED: 06/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/664,941

Applicant(s)

LEE ET AL.

Examiner

Michael C Maskulinski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 September 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

M

**Non-Final Office Action**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 9-11, 22-24, and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Cardoza et al., U.S. Patent 5,630,049.

Referring to claims 1, 9, 22, and 28:

- a. In column 10, lines 12-17, Cardoza et al. disclose that an Ethernet network connection may be used between a host and target computer system (establishing a connection between a client computer and a server computer over the Internet).
- b. In column 12, lines 35-45, Cardoza et al. disclose initializing through sending a message using a remote debugger on the host computer (receiving a request from a debug program of said server computer).
- c. In column 12, lines 35-45, Cardoza et al. disclose that the target computer system may then respond to the initializing by sending a reply message with target system initialization information that is necessary for remote debugging (causing an application program of said client computer to generate a response to said request).

d. In column 10, lines 56-67 continued in column 11, lines 1-11, Cardoza et al. disclose a polling mode and an interrupt-driven mode for the target computer system (transmitting an indication of said response back to said debug program).

e. In column 2, lines 42-67, Cardoza et al. teaches repeating the steps multiple times so as to run said application program through a diagnostic sequence.

Referring to claims 2, 10, 23, and 29, in the Abstract, Cardoza et al. disclose that user input, in the form of debug commands, is received using a remote debugger in the first computer system to control the remote debugging session (said diagnostic sequence is provided to said debug program by a user of said of said server computer).

Referring to claims 3, 11, 24, and 30, in column 2, lines 53-55, Cardoza et al. disclose issuing to the software debugger a debug command that indicates a function to be performed by the target computer system (said diagnostic sequence is preprogrammed into said debug program).

Referring to claim 4, in column 18, lines 61-64, Cardoza et al. disclose that in a preferred implementation, the target operating system is booted and remains in polling mode waiting for messages from the host computer system to establish a network connection (detecting a debug request initiated by a user of said client computer).

Referring to claim 5, in column 21, lines 59-62, Cardoza et al. disclose that in order to maintain and operate a user debugging session to test the target operating system, information that describes the software being tested may reside on either the host or target system (transmitting identifications of said application program to said

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server computer). In column 20, lines 56-60, Cardoza et al. disclose that information about the target computer system, such as an incarnation number and the address locations of certain executable code images comprising operating system code, may comprise the RESP\_INIT message (transmitting identifications of said client computer to said server computer).

Referring to claim 6, in column 20, lines 66-67 continued in column 21, lines 1-9, Cardoza et al. disclose that the use of a particular password for remote debugging in the target computer system is illustrative of a general security mechanism to authorize a network connection between two computer systems. Implementations may include other security mechanisms employing both an account and password, for example (transmitting a user identification and a password provided by a user of said client computer to said server computer).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7, 8, 12-21, 27, 31, 32-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cardoza et al., U.S. Patent 5,630,049, and further in view of Cowart, Mastering Windows 98.

Referring to claims 7 and 12:

f. In column 11, lines 37-62, Cardoza et al. disclose that the target computer system may be in an infinite programming loop continuously executing a series of instructions (running of said preprogrammed diagnostic sequence). A user on the host computer system entering commands at a remote debugging session connected to the target computer system may observe the infinite loop execution and interrupts it (the preprogrammed diagnostic sequence is paused by a user of said server computer and control of said debug program is transferred to said user of said server computer). Further, in column 22, lines 30-32, Cardoza et al. disclose the STEP command, which is a user debug command which allows a user to single step through source code being tested on the target computer system (receiving a request initiated by said user of said server computer).

g. In column 22, lines 34-37, Cardoza et al. disclose that the remote debugger tells the target operating system to execute a series of machine instructions that correspond to the single source code statement (causing said application program to respond to said request).

h., i. In column 5, lines 3-60, Cardoza et al. disclose messages sent between the host and target computers. However, Cardoza et al. don't explicitly disclose generating a graphics file including pixel information for a graphics image displayed on a display screen of said client computer and transmitting said graphics file to said server computer so that said graphics image is displayed on a display screen of said server computer. In Chapter 19, Cowart discloses NetMeeting. Further, on pages 18-19 of Chapter 19, Cowart discloses a

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Whiteboard feature used to draw a picture that the other people in the conference can see. An on pages 19-21 of Chapter 19, Cowart discloses sharing documents and applications where other people you're connected to can see your actions as you use that program, such as editing a document and so forth. It would have been obvious to one of ordinary skill at the time of the invention to include NetMeeting of Cowart into the system of Cardoza et al. A person of ordinary skill in the art would have been motivated to make the modification because NetMeeting is Internet compatible and provides a visual interface accessible to all users connected. It enables other users to see what one is doing on his/her computer.

Referring to claims 8 and 13, In column 2, lines 42-67, Cardoza et al. teaches repeating the steps multiple times so as to run said application program through a diagnostic sequence.

Referring to claims 14 and 20:

- a. In column 10, lines 12-17, Cardoza et al. disclose that an Ethernet network connection may be used between a host and target computer system (establishing a connection between a client computer and a server computer over the Internet).
- b. In column 12, lines 35-45, Cardoza et al. disclose initializing through sending a message using a remote debugger on the host computer (receiving a request from a debug program of said server computer).

c. In column 12, lines 35-45, Cardoza et al. disclose that the target computer system may then respond to the initializing by sending a reply message with target system initialization information that is necessary for remote debugging (causing an application program of said client computer to generate a response to said request).

d., e. In column 5, lines 3-60, Cardoza et al. disclose messages sent between the host and target computers. However, Cardoza et al. don't explicitly disclose generating a graphics file including pixel information for a graphics image displayed on a display screen of said client computer and transmitting said graphics file to said server computer so that said graphics image is displayed on a display screen of said server computer. In Chapter 19, Cowart discloses NetMeeting. Further, on pages 18-19 of Chapter 19, Cowart discloses a Whiteboard feature used to draw a picture that the other people in the conference can see. An on pages 19-21 of Chapter 19, Cowart discloses sharing documents and applications where other people you're connected to can see your actions as you use that program, such as editing a document and so forth. It would have been obvious to one of ordinary skill at the time of the invention to include NetMeeting of Cowart into the system of Cardoza et al. A person of ordinary skill in the art would have been motivated to make the modification because NetMeeting is Internet compatible and provides a visual interface accessible to all users connected. It enables other users to see what one is doing on his/her computer.



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Referring to claims 15 and 33, the combination of Cowart and Cardoza et al. teaches a visual interface for debugging applications. However, the combination of Cowart and Cardoza et al. doesn't explicitly teach that the graphics file is in a GIF, JPEG, or TIF graphics file. The Examiner takes Official Notice that in the art of computer visual displays, it is obvious to use a graphics file such as a GIF, JPEG, or TIF graphics file. An example of this is clipart, Internet pictures, and scanned pictures. It would have been obvious to one of ordinary skill at the time of the invention to include the GIF, JPEG, or TIF graphics file into the combined system of Cowart and Cardoza et al. A person of ordinary skill in the art would have been motivated to make the modification because NetMeeting contains a whiteboard on which the user can draw pictures, supports sharing a clipboard, and supports video streaming, all of which can be in a GIF, JPEG, or TIF graphics file format.

Referring to claims 16 and 21, in column 18, lines 61-64, Cardoza et al. disclose that in a preferred implementation, the target operating system is booted and remains in polling mode waiting for messages from the host computer system to establish a network connection (detecting a debug request initiated by a user of said client computer).

Referring to claim 17, in column 2, lines 42-67, Cardoza et al. teaches repeating the steps multiple times so as to run said application program through a diagnostic sequence.

Referring to claim 18, in column 21, lines 59-62, Cardoza et al. disclose that in order to maintain and operate a user debugging session to test the target operating

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system, information that describes the software being tested may reside on either the host or target system (transmitting identifications of said application program to said server computer). In column 20, lines 56-60, Cardoza et al. disclose that information about the target computer system, such as an incarnation number and the address locations of certain executable code images comprising operating system code, may comprise the RESP\_INIT message (transmitting identifications of said client computer to said server computer).

Referring to claim 19, in column 20, lines 66-67 continued in column 21, lines 1-9, Cardoza et al. disclose that the use of a particular password for remote debugging in the target computer system is illustrative of a general security mechanism to authorize a network connection between two computer systems. Implementations may include other security mechanisms employing both an account and password, for example (transmitting a user identification and a password provided by a user of said client computer to said server computer).

Referring to claims 27 and 31:

e. In column 22, lines 34-37, Cardoza et al. disclose that the remote debugger tells the target operating system to execute a series of machine instructions that correspond to the single source code statement (transmitting to said client computer a request for said application program to take an action).

f., g. In column 5, lines 3-60, Cardoza et al. disclose messages sent between the host and target computers. However, Cardoza et al. don't explicitly disclose receiving a graphics file including pixel information for a graphics image

displayed on a display screen of said client computer in response to said action displaying said graphics image on a display screen of said server computer. In Chapter 19, Cowart discloses NetMeeting. Further, on pages 18-19 of Chapter 19, Cowart discloses a Whiteboard feature used to draw a picture that the other people in the conference can see. An on pages 19-21 of Chapter 19, Cowart discloses sharing documents and applications where other people you're connected to can see your actions as you use that program, such as editing a document and so forth. It would have been obvious to one of ordinary skill at the time of the invention to include NetMeeting of Cowart into the system of Cardoza et al. A person of ordinary skill in the art would have been motivated to make the modification because NetMeeting is Internet compatible and provides a visual interface accessible to all users connected. It enables other users to see what one is doing on his/her computer.

h. In column 2, lines 42-67, Cardoza et al. teaches repeating the steps multiple times so as to run said application program through a diagnostic sequence. Further, on page 19 of Chapter 19, Cowart discloses sharing applications so that other people you're connected to can see your actions as you use that program, such as editing a document and so forth (repeating (e) through (g) multiple times so as to allow said user of said server computer to interactively debug said application program by transmitting requests for said application program to take certain actions in consideration of graphics images

defined in graphics files received from said client computer in response to prior such requests).

Referring to claims 32 and 37:

- a. In column 18, lines 61-64, Cardoza et al. disclose that in a preferred implementation, the target operating system is booted and remains in polling mode waiting for messages from the host computer system to establish a network connection (detecting a debug request initiated by a user of said client computer).
- b. In column 22, lines 34-37, Cardoza et al. disclose that the remote debugger tells the target operating system to execute a series of machine instructions that correspond to the single source code statement (transmitting to said client computer a request for said application program to take an action).
- c., d. In column 5, lines 3-60, Cardoza et al. disclose messages sent between the host and target computers. However, Cardoza et al. don't explicitly disclose receiving a graphics file including pixel information for a graphics image displayed on a display screen of said client computer in response to said action displaying said graphics image on a display screen of said server computer. In Chapter 19, Cowart discloses NetMeeting. Further, on pages 18-19 of Chapter 19, Cowart discloses a Whiteboard feature used to draw a picture that the other people in the conference can see. An on pages 19-21 of Chapter 19, Cowart discloses sharing documents and applications where other people you're connected to can see your actions as you use that program, such as editing a

document and so forth. It would have been obvious to one of ordinary skill at the time of the invention to include NetMeeting of Cowart into the system of Cardoza et al. A person of ordinary skill in the art would have been motivated to make the modification because NetMeeting is Internet compatible and provides a visual interface accessible to all users connected. It enables other users to see what one is doing on his/her computer.

e. In column 2, lines 42-67, Cardoza et al. teaches repeating the steps multiple times so as to run said application program through a diagnostic sequence. Further, on page 19 of Chapter 19, Cowart discloses sharing applications so that other people you're connected to can see your actions as you use that program, such as editing a document and so forth (repeating (b) through (d) multiple times so as to allow said user of said server computer to interactively debug said application program by transmitting requests for said application program to take certain actions in consideration of graphics images defined in graphics files received from said client computer in response to prior such requests).

Referring to claim 34:

a1 In column 21, lines 59-62, Cardoza et al. disclose that in order to maintain and operate a user debugging session to test the target operating system, information that describes the software being tested may reside on either the host or target system (receiving an identification of said application program from said client computer).

a2 In column 21, lines 59-62, Cardoza et al. teaches receiving information about the software being tested. However, Cardoza et al. don't explicitly disclose checking said application program identification against an application program identification list to confirm that a contractual obligation exists to debug said application program. The Examiner takes Official Notice that it is well known in the art of shareware, freeware, and public domain software that the user enters into a contractual agreement with the distributor and receives services based upon this contractual agreement. An example of this is Red Hat Linux. It would have been obvious to one of ordinary skill at the time of the invention to include the concept of a contractual agreement into the system of Cardoza et al. A person of ordinary skill in the art would have been motivated to make the modification because checking for a contractual agreement before debugging prevents unwanted users from using the debugging service.

Referring to claim 35:

a3 In column 20, lines 56-60, Cardoza et al. disclose that information about the target computer system, such as an incarnation number and the address locations of certain executable code images comprising operating system code, may comprise the RESP\_INIT message (transmitting identifications of said client computer to said server computer).

a4 In column 20, lines 56-60, Cardoza et al. teaches receiving identification of the client computer. However, Cardoza et al. don't explicitly disclose confirming that said client computer is authorized to run said application program by

comparing said client computer identification against an authorized client computer identification. The Examiner takes Official Notice that it is well known in the art of shareware, freeware, and public domain software that the user enters into a contractual agreement with the distributor and receives services based upon this contractual agreement. An example of this is Red Hat Linux. It would have been obvious to one of ordinary skill at the time of the invention to include the concept of a contractual agreement into the system of Cardoza et al. A person of ordinary skill in the art would have been motivated to make the modification because checking for a contractual agreement before debugging prevents unwanted users from using the debugging service.

Referring to claim 36, in column 20, lines 66-67 continued in column 21, lines 1-9, Cardoza et al. disclose that the use of a particular password for remote debugging in the target computer system is illustrative of a general security mechanism to authorize a network connection between two computer systems. Implementations may include other security mechanisms employing both an account and password, for example (receiving a user identification and a password provided by a user of said client computer to said server computer and verifying that said user identification and said user password are valid).

5. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cardoza et al., U.S. Patent 5,630,049.

Referring to claim 25:

a1 In column 21, lines 59-62, Cardoza et al. disclose that in order to maintain and operate a user debugging session to test the target operating system, information that describes the software being tested may reside on either the host or target system (receiving an identification of said application program from said client computer).

a2 In column 21, lines 59-62, Cardoza et al. teaches receiving information about the software being tested. However, Cardoza et al. don't explicitly disclose checking said application program identification against an application program identification list to confirm that a contractual obligation exists to debug said application program. The Examiner takes Official Notice that it is well known in the art of shareware, freeware, and public domain software that the user enters into a contractual agreement with the distributor and receives services based upon this contractual agreement. An example of this is Red Hat Linux. It would have been obvious to one of ordinary skill at the time of the invention to include the concept of a contractual agreement into the system of Cardoza et al. A person of ordinary skill in the art would have been motivated to make the modification because checking for a contractual agreement before debugging prevents unwanted users from using the debugging service.

Referring to claim 26:

a3 In column 20, lines 56-60, Cardoza et al. disclose that information about the target computer system, such as an incarnation number and the address locations of certain executable code images comprising operating system code,



may comprise the RESP\_INIT message (transmitting identifications of said client computer to said server computer).

a4 In column 20, lines 56-60, Cardoza et al. teaches receiving identification of the client computer. However, Cardoza et al. don't explicitly disclose confirming that said client computer is authorized to run said application program by comparing said client computer identification against an authorized client computer identification. The Examiner takes Official Notice that it is well known in the art of shareware, freeware, and public domain software that the user enters into a contractual agreement with the distributor and receives services based upon this contractual agreement. An example of this is Red Hat Linux. It would have been obvious to one of ordinary skill at the time of the invention to include the concept of a contractual agreement into the system of Cardoza et al. A person of ordinary skill in the art would have been motivated to make the modification because checking for a contractual agreement before debugging prevents unwanted users from using the debugging service.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,357,019 B1                      Blaisdell et al.

U.S. Patent 6,327,608 B1                      Dillingham

U.S. Patent 6,282,701 B1                      Wygodny et al.

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U.S. Patent 6,263,456 B1            Boxall et al.

U.S. Patent 6,223,307 B1            Mastrangelo et al.


U.S. Patent 6,216,237 B1            Klemm et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C Maskulinski whose telephone number is (703) 308-6674. The examiner can normally be reached on Mon-Thu 7:30-5 and Fri. 7:30-4 (second Fri.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W Beausoliel can be reached on (703) 305-9713. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

MM  
June 21, 2003

  
ROBERT BEAUSOLIEL  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100